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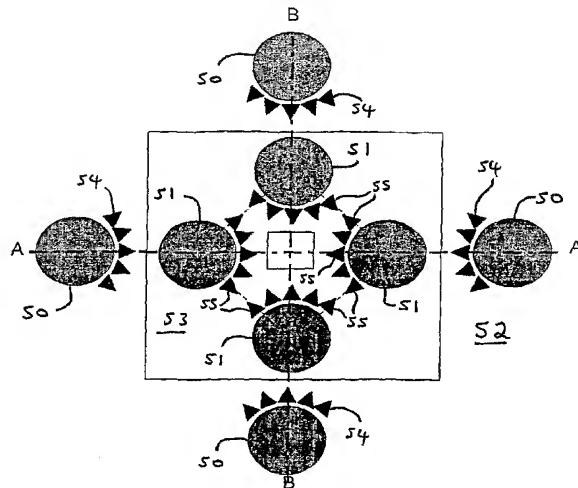
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(54) Title: AN ANTENNA WITH PARTIALLY SPHERICAL DIELECTRIC LENSES



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(57) **Abstract:** An antenna is provided comprising a first group of part-spherical dielectric lenses supported on a first portion of a conducting ground plane arranged to reflect signals emerging from the lens, each of the lenses having a number of associated switchably selectable antenna feed elements arranged around the periphery of at least one sector of the lens for injecting signals into and/or receiving signals propagated by the lens, wherein each lens and the associated feed elements of the first group has a different orientation and may be operated to provide coverage in respect of a different region. The antenna also comprises a second group of one or more spherical or part-spherical dielectric lenses and associated switchably selectable antenna feed elements, oriented and operable to provide coverage to a region other than that covered by lenses of the first group. The first portion of the ground plane may be substantially annular and arranged to surround a well-like region of the antenna in which the second group of one or more lenses may be accommodated.



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